FOR MYSORE STATE

Public Works (1954) Department

Ms. SERIES.

G.O. No. 1346 1346.

1346

Dated 15th April, 1954.

[Despatch Abstract.]

PORTS - Mangalore - Improvements - Construction of new tide house Estimate for Rs. 6,000/- - Sanctioned.

From
L.H.Cornish Esq.,
State Port Officer
Post Box No.13,
Madras-1.

To
The Secretary to Government,
Public Works Department,
Madras.

No.114-SD/54-1 dated 1st April 1954.

SECRETARIAT
28896
2 APR 1954
PUBLIC WORKS DEPARTMENT

Sir,

Sub:-Ports - Mangalore - Improvements construction of a new tide house - Estimate for Rs.6,000/- forwarded.

I forward herewith for the sanction of Government an estimate amounting to Rs.6,000/- for the construction of a new permanent mason tide house at the port of Mangalore prepared and furnished by the Executive Engineer, P.W.D., South Kanara Division, Mangalore - vide copy of his letter No.747M dated 19-3-54 enclosed. The report accompanying the estimate explains the proposals and necessity for the wor

It is considered very necessary and urgent that the construct of the new tide house should be completed before the commencement of the South West Monsoon and the automatic tide gauge recorder shifted from the existing tide house at the gut, in order to avoid probable damage to the tide gauge instruments during the monsoon, I am therefo issuing instructions to the Port Officer, Mangalore to call for short notice quotations for the work, from local contractors and be prepare to proceed with the work immediately on receipt of the estimate duly sanctioned by Government.

In the circumstances I request that Government may be pleased to sanction the above estimate as urgently as possible.

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lans and 1 copy of
ter.

Yours faithfully,

State Port Officer

From the Executive Engineer, South Kanara Division, P.B.No.5, Mangalore
To the Port Officer, Mangalore.
No.747M dated 19-3-54.

Sub:-Miscellaneous - Mangalore Port - Construction of new tide house - Estimate and plans - Forwarded -
Ref:-Your letter No.3592/53-1 dated 19-2-54 and 11-3-54.

I forward herewith an estimate amounting to Rs.6,000/- along with two plans S.K.Nos.319 & 320/53-54 for constructing a permanent masonry tide house at the marine yard site for your countersignature, and early transmission to the State Port Officer, Madras thereto for obtaining approval of the Government and to take further action in the matter.

In as much as the stability of the existing tide house situated near the gut is considerably affected by heavy erosion that takes place when the Netravati and Gurpur rivers are in spate, it is finally decided to shift the tide house to a more sheltered place near the Marine yard as suggested by the Director C.W. & PR. Station, Poona, vide his letter No.179/4663 dated 3-8-53. The concurrence of the Director, Geodetic & Training Circle, Dehra Dun to this effect has also been obtained vide his letter No.5368 T.42 E 2/19 dt.18-9-53.

The report accompanying the estimate is self explanatory and explains clearly the proposals.

Since the work is proposed to be taken up early in April 1954, I request you to please take immediate action in the matter. The receipt of the estimate and plans may please be acknowledged.

e for Rs.6,000/-
.K.Nos.319 & 320/53-54.

Copy to the Director, Geodetic & Training Circle, Dehra Dun for information.

Please communicate your remarks if any, on the location and design of the tide house, to the Port Officer, Mangalore with intimation to this office for taking further action. A blue print copy each of the 2 plans referred to above are herewith enclosed for reference.

Sd. M.Venkataraman, 10-3-54
Executive Engineer,
South Kanara Division.

Copy to the State Port Officer, Madras for information.

Sd. M.Venkataraman, 10-3-54
Executive Engineer,
South Kanara Division.

/True Copy/

State Port Officer.

IR.3.

Copy to the Director, Central Water & Power Research Station, Poona-for information. Blue print copies of plans for the above work are herewith enclosed for reference.

Your remarks on the location and design of the tide house, if any, may please be communicated to the Port Officer, Mangalore for information to this office.

Sd. M.Venkataraman, 10-3-54
Executive Engineer,
South Kanara Division.

Report to accompany the estimate for constructing a New Tide House at Mangalore Port - Amount of Estimate Rs.6,000/-

In connection with the investigation work for improvements to Mangalore Port ordered to be carried out by this department in G.C. No.3036 F/49-20 P.W., dated 2-5-1951, a tide house was constructed in August 1952 and an automatic tide gauge supplied by the Director, Geode and Training circle Dehra Dun was installed for observation of tidal variations. The structure then constructed was of a temporary nature (i.e. A cabin resting on wooden piles driven into the bed of the river and is situated at the mouth of the river, with an wooden foot bridge get access to the cabin. During the monsoon of August 1952 and also July 1953, heavy erosion took place under the piles due to abnormal fl in the Netravati river undermining the stability of the structure. Temporary protection work by way of dumping stones was carried, but th is going to be a recurring feature every year during floods in the riv

The Director Central water & Power Reserch Station, Poona when he inspected the tide house in July 1953, has suggested the shifting of t tide house to a safer position near the marine yard, where it is well sheltered when the Netravati and Gurpur rivers are in spate vide his letter No.179/4663 dated 3-8-53. The Director, Geodetic and Training Circle, Dehra Dun to whom the results of observation recorded by the automatic tide gauge are ultimately to be furnished has also agreed to the shifting of the tide house to the new site vide his letter No.5368 42E-2/19 dated 8-9-53. The present proposal is to construct a permane masonry structure in the land itself (near flag staff) with a masonry wall and a loading channel with tunnel for free flow of water into the well.

The accompanying estimate provides for the construction of a tide house 8'-0" x 2'-0"x8'-0"(inside) with a 4'-0" Dr.(inside) masonery we and 2'-6"x5'-6" tunnel. The lowest L.T.L. observed during 1953 was 0. above L.W.O.S.T(on 27-9-53) and highest H.T.L. was 6.7 above L.W.O.S.T. (on 17-2-53 and the H.T.L. in 1953 at the site is 8.9 above L.W.O. The bottom of the well is proposed to be 3'-0" below L.W.O.S.T. which allows for about 3'-0" of water in the well during the lowest L.T.L. One foot Diameter iron pipe available in the old tide house will be fi in the well, to serve as float pipe. The table platform iron pipe and other materials fit for reuse available from the old tide house will b utilised for the installation of instrument and construction of the ne tide house wherever possible and a credit for Rs.350/- has been provid for the same in the estimate.

A Lum Sum amount of Rs.2,208 has been provided in the estimate for putting up ring bund and pumping out water as the foundation for well and retaining wall has to be laid about 6'-0" below water level in the river during H.T.L. and as the soil is sandy heavy springs are expecte This amount will be necessary for the same.

The new site was inspected by the Port Officer, Mangalore and he h also agreed to the suitability of the same.

The estimate is priced according to current shedule of rates.

Sd/
Executive Engineer,
South Kanara Dn.,
Mangalore.

Sd/
Assistant Engineer, P.W.D.,
Port Works Subdivision, Mangalore.

Sd/ Subbanatham
6.4.54
Assistant Engineer(Marine)
State Port Office, Madras.

DETAILED ESTIMATE

Details of work	No.	Measurement in feet Length	Breadth	Depth	Area / content
1	2	3	4	5	6
CONSTRUCTING A NEW TIDE HOUSE AT MANGALORE PORT.					
Dismantling existing granite stone rivetment	1	15-0	4'-0+2'-0 / 2 x 13'-0		585
Sundries below ground level (not measured)					115
					700 Cft.
Earthwork excavating in ordinary soil S.S. 20 B					
Well	1	22/7 x 4 x 4		16-0	805
Tunnel	1	8'-6"	9'-6"	7'-0	565
Side wall	2	2'-9"	6'-0	7'-0	231
Top of Tunnel.	1	9'-6"	3'-0	8'-6"	242
Foundation of tidehouse(alround)	1	35'-0	2'-6"	3'-6"	306
Sundries					351
					2500 Cft.
Earthwork excavating in slushy soil under water					
Leading channel	1	(70'-3" - 34'-3")	x 2'-6"+9'-0 / 2	x 3·3	= 683
Sundries					317
					1000 Cft.
Concrete broken granite stone 1½" size in cement mortar 1:4:10					
Under well	1 x	22/7 x 4-0 x 4'-0		1-6	75
Under Tunnel	1	11-0	9-6	1-6	157
Deduct for portion of well (segmat)	1	9 sqft		1-6	14
Wall at 2 y/plan foundation → elation of the tidehouse)	2	2-9	6-0	1-6	50
Alround →	1	35-0	2-6	1-0	88
Steps	1	3-0	2-0	0-6	3
Floor	1	6-3	6-3	0-4	13
Deduct well portion	1	22/7 x 3·6 x 3·6		0-4 →	13
Add extra					21
					407 27
					380 cft
Laterite masonry in cement mortar 1:4 for well work					
Well steining	1 x 22/7 x (3'-6"² - 2²) →			15-0	389
Deduct for tunnel opening	1	2-6	1-6	5-6	2:
Add sundries					12
					401 2:
					380 cf:

		3	4	5	6	
Laterite masonry in cement mortar 1:4 for tunnel main structure etc.						
Tunnel side wall	2	$\frac{(10-0+9-0)}{2}$	$\frac{(3-0+1-6)}{2}$	5-6	235	
Retaining wall fromt side upto +2.5	21	$\frac{(2-9+4-3)}{2}$	$\frac{(5-0+4-0)}{2}$	5-6	173	
-do- from +7.00 to +11.00	1	14-0	$\frac{3-6+1-6}{2}$	8-0	280	
Tidehouse basement alround	1	35-0	1-6	3-0	158	
Corner pillars	4	1-3	1-3	8-0	50	
Panel walls	4	7-6	0-9	8-0	180	
Gable walls	2	7-6/2	0-9	3-0	17	
Steps bottom	1	3-0	1-6	0-6	2	
top	1	3-0	1-0	0-6	2	
Deduct door	1	3-0	0-9	6-0		14
" window	2	3-6½	0-9	4-1½		22
" lintel over door	1	4-6	0-9	0-6		2
" lintel over window	2	5-0	0-9	0-6		4
Add extra					45	
					1142	42
					1100 Cft	
Reinforced cement concrete slab in C.M. 1:2:4						
Slab over tunnel	1	9-0	4-6	0-6	20.25	
Add extra					4.75	
					25.00	Cft
Plastering with cement mortar 1:4, 1/2" thick						
Inside wall	1	22/7 x 4-0		15-0	189	
Deduct for tunnel portion	1	2-6		5-6		14
Add tunnel inside sides	2	$\frac{11-6+9-6}{2}$		5-6	116	
Front retaining wall upto +2.5	1	14-0		5.63	79	
Offset	1	14-0		0.6	7	
Front retaining wall from +3-0 to 11-0	1	14-0		8-2	115	
Top and rear 1' depth	1	14-0		2-6	35	
Tidehouse basement alround	1	41-0		2-0	82	
Superstructure 4 sides	4	10-6		8-0	336	
Offset over basement	4	7-6		0-4½	11	
Gabb walls outside	2	7-6/2		3-0	23	
Walls inside 4 sides	4	8-0		8-0	256	
Gabb walls inside	2	7-6/2		3-0	23	
Deduct door both sides	2	3-0		6-0		36
" windows "	2x2	3-6½		4-1½		58
Add sides of door	1	15-0		0-5	6	
" windows	2	15-4		0-6	15	
Steps top	1	3-0		3-0	9	
Sides bottom	2	1-6		0-6	2	
top	2	1-0		0-6	1	
floor	1	6-3		6-3	39	
Deduct well portion	1	22/7 x 8 x 2				13
Add sundries					77	
					1421	121

1	2	3	4	5	6
9. Country wood (~~Kind~~ bogi) wrought and put up					
Lintel over door	1	4-6	0-9	0-6	1.69
" windows	2	5-0	0-9	0-6	2.75
Wall plate	2	13-0	0-4	0-3	2.17
Redge	1	13-0	0-3	0-6	1.63
Rafter	2x4	8-0	0-2	0-4	2.56
Purlins	6	13-0	0-2	0-2½	2.71
Eaves board	2	13-0	0-6	0-½	0.54
Beam over well	1	5-6	0-3	0-6	0.69
Floor plank over well	1	22/7 x 5/2 x 5/2		0-2	3.27
Sundries					0.99
					21.00 cft.
10. Providing a fixing country wood (Kind. borge) fully panelled door of size 3-0 x 6-0 panelled with 1 cement asbestos ~~8 cwts~~ sheet including all fittings					
Door	1				1 No.
11. Providing and fixing country wood (Kind bogi) window of size 3-6½ x ~~4-6~~ 4-1½ glazed including all filling					
Windows	2				2 Nos
12. Roofing with ~~xxxxx~~ cement asbestos ~~trafford~~ corrugated sheets fixed with G.I. hooks bolts with between G.I. washers including ridges, barge boards complete roof including width of end barge boards"	2	14-6		8-0	2x2 or 240
13. White washing 2 coats					
Walls outside (Superficial metre)	4	10-6		8-0	336
inside	4	8-0		8-0	256
Gables both sides	2x2	7-6/2		3.0	45
Deduct door both sides	2	3-0		6-0	36
" windows	2x2	3-6½		4-1½	58
Add sides of door	1	15-0		0-5	6
" window	2	15-4		0-6	15
Sundries					36
					694 94
					600 sft.
14. Painting two coats with chocolate paint new wood work					
Door panelled	1	7-0	2½	6-0	41
Windows glazed	2	3-6½	1½	4-1½	44
Ridge	1	13-0	1½	1 6	20
Rafters	8	8-0		1-0	64
Purlins	6	13-0		0-9	59
Eves board	2	13-0		1-0	26
Sundries					46
					300 sft.

1	2	3	4	5	6
arring two coats with coal tar					
Basement all round	1	41-0		1-6	.62
Beam over well	1	5-6		1-6	8
Floor plank bottom	1	22/7 x 5/2 x 5/2			20
Sundries					10
					100 cft
16. Reconstructing dismantled rough stone revetment with old stones wherever necessary					
Lump sum quantity					100 cft
17. Fixing up of 1'-0" dr. iron pipe inside the well in the correct position with iron clamps fixed to side wall removing the table platform and automatic tide gauge from old tide house and fixing them in the new tide house complete including painting iron pipe two coats with red oxide paint.					L.S.
18. Putting up, ring up, pumping out water, scaffolding works if necessary etc. complete.					L.S.
19. Fixing up a new reference staff in the river near tide house					L.S.
20. Refilling with excavated earth other than sand					
Over slab between well retaining wall	1	9-6	4-0 (ave)	7-7	29 3/4
Sundries. ~~Suction~~ for basement curved position of well etc.					57
					350 Cft
21. Contingencies and petty supervision charges					L.S.
22. Reduct credit for old materials from old tide house					L.S.

DESIGN FOR THE R.C.SLAB OVER THE FUNNEL.

Portion of slab below retaining wall
Effective span l 2'-6" + 1'-0" + 1'-0" = 4'-6"
Width b = 3'-6".
Load coming over the portion
4'-6" (3'-6" plus 1'-6") / 2 x 8'-3" x 120 (wt. of laterite masonry)
= 11137.5 lbs. or 11138 lbs.
Self weight of slab (assuming a thickness of 6"
$\frac{9}{2} \times \frac{1}{2} \times \frac{7}{2} \times 150$ = 1181 lbs.
Total weight 11138 plus 1181 = 12319 lbs.

Max. B. M. $= \frac{Wl}{8} = 127\ bd.2$

$= 127 \times \frac{7}{2} \times 12\ d2 = \frac{12319 \times 9 \times 12}{2 \times 8}$

$d2 = \frac{110871}{7112}$

d = 3.949" or 4"

Portion of slab below side wall of well.
Effective span l = 2'-6" + 1'-0" + 1'-0" = 4'-6".
Width b = 1'-6"

Load coming over this portion
4'-6" x 1'-6" x 9'-3" x 120 = 7492.5 lbs. or 7493 lbs.

Self weight of slab assuming 6" thickness
$\frac{9}{2} \times \frac{3}{2} \times \frac{1}{2} \times 150$ = 506 lbs.

Total : 7999 lbs.

$127\ bd2 : \frac{Wl}{8}$

$127 \times 18 \times d2 = \frac{7999 \times 9 \times 12}{2 \times 8}$

$d2 : \frac{7999 \times 9 \times 12}{2x8x127x18} = \frac{23997}{1016}$

d = 4.86"

The thickness of slab for condition (b) above is adopted throughout its length.
Area of steel required .008 bd.
0.008x18x4.86 : 0.6998 Sq.ft.

Using 1/2" rods No. of rods required for 1'6" w length of slab
$= \frac{0.6998}{0.196}$: 3.6 or 4 rods

Total thickness : $4.86 + \frac{1}{4} + \frac{3}{4}$ = 5.86 or 6"

Sd/-
Executive Engineer,
Kanara Divn.,Mangalore.

Sd/
Assistant Engineer,P.W.D.,
Port Works Subdivision,Mangalore.

Data sheet to accompany the estimate for Constructing a new Tide House at Mangalore Port.

Quantity.	Description of work.	Rate	Per	Amount			To
	(1) Dismantling granite stone revetment & stacking the materials.						
100 cft.	As per S.I.No.5 N.	2-10-0	100 cft.	2-10-0			2
	(2) Earthwork excavating in ordinary soil S.S.20 B. as per deep foundation.						
1000 cft.	As per S.I.No.12B.	10-14-0x2	1000 cft.	21-12-0			21
	(3)Earthwork excavating in slushy soil under water.						
1000 cft.	As per S.I-No.13B.	26-0--0	1000 cft.	26--0-0			26
	(4) (a) Cost of cement per ton at site.						
1 ton 25cft.	Cement cost at store as per Dl.No. 1726 N/3-10/33 .	67-8-0	1 ton	67-8-0			
1 ton 25 cft.	Lead 1 mile by road.	7-0-6	100 cft.	1-12-2			
				89--4-2			89
	(b) Cost of cement mortar 1:4.						
100 cft.	Sand cost S.I.No.36 A	2-8-0	100 cft.	2	8	0	
	Lead for sand 9 mile from Gurpur river by boat.	23-7-0	100 cft.	23	7	0	
1 Ton 25cft.	Cement at site	89-4-0	25 cft.	89	4	0	
100cft.	Mixing charges	4-8-0	100cft.	4	8	0	
	Sundries			0	5	0	
				120	0	0	120
	4) Concrete broken granite stone 1½" size in cement mortar 1:4:10.	x 23-7-0	100 cft	23-7-0			
100 cft.	Hard broken stone 1½" lead 4½ miles by road	23--0-0	100 cft.	23	0	0	
40cft.	C.M. 1: 4	x 120--0-0	100 cft.	48	0	0	
½ No.	Mason II class	2-12-0	each	1	6	0	
5 No.	Man mazdoor	2--0-0	each	10	0	0	
4 No.	Woman mazdoor	1--0-0	,,	4	0	0	
	Sundries			1	3	0	
				111	0	0	
	(5) Laterite masonry in cement mortar 1:4 for well work.						
110 cft.	Laterite stones	58 0 0	100 cft.	63	12	10	
	Lead 6 miles road by lorry 25-12-6 + 3-0-0	28 12 6	100 cft.	31	10	7	
18cft.	C.M. 1:4	120 0 0	100 cft.	21	9	7	
2 No.	Brick layers	3 2 0	1 No.	6	4	0	
5 No.	Stone cutter	3 2 0		15	10	0	
2 No.	Man mazdoor	2 0 0		4	0	0	
4 No.	Woman mazdoor	1 0 0		4	0	0	
1 No.	Head Mason	3 2 0		3	2	0	
				150	10	0	

Quantity.	Description of work	Rate per	Amount	Total
	Add extra for well ~~staining~~ sinking work 3 No. Stone cutters			
	1 No. Mason.	3-2-0 each	12 8 0	
	Total		162 9 0	
	Sundries		0 7 0	
			163 0 0	163 0
	(6) Laterite masonry in C.M. 1:4 for tunnel ~~walls~~ superstructure etc.			
100 cft.	As above	150-1-0		
	Sundries	0-7-0		
		150-8-0	150 8 0	
	(7) Reinforced concrete in cement mortar 1:2:4			
96 cft.	Broken stone 3/4"	42-0-0 per 100 cft.	40 5 1	
	Lead 4½ miles road	23-7-0 "	22 8 0	
48cft.	Sand at site	25-~~15~~-0 per 100 cft.	12 7 2	
2160 lbs	Cement at site	89--4-0 per 25 cft.	85 10 10	
24cft.	Mason II class	2-12-0 each	2-12--0	
1 No.				
6 No.	Man	2-0-0 ,,	12 0 0	
10. No.	Woman	1-0-0 ,,	10 0 0	
	Sundries		0 4 11	
			186 0 0	
	Rate for 1 cft. of concrete in C.M. 1:2:4 $\frac{186}{100}$ = 1-13-9.			
	(7) ~~Reinforced concrete co~~ concrete in C.M.1:2:4	1cft. 1-13-9		
	Requirement of steel for this work taking 1'-0 width of slab contents 4'6"x1'-0x0-6": 2.25cft			
	No.rods for main reinforcement ½" D. rods 4 Nos. each 5 ft. long wt. 20 x·668			13.36
	Distributor 1/4" rods 5 No. x 1'-0 wt.			.835
				14.195
	Wt. of rods reqd. per c.ft. $\frac{14.195}{2.25}$ 6.3 lbs or			7 lbs.
7 lbs.	M.S.rods	0-4-0 lbs.	1-12-0	
1 cft.	Centering S.1~~0~~ 32.39 A	0-12-3 1sft.	1--8-6	
	Sundries.	or 0.5ft.	0--5-9	
			5--8-0 or	5-8-0 /c.ft.
	(8) Plastering with cement mortar 1:4 1/2" thick 100 sq.ft.			
5 cft.	C.M. 1:4	120-0-0 per 100 cft.	6--0-0	
1 No.	Brick layer II class	2-12-0 each	2-12-0	
1/8No.	Man	2-0-0 ,,	1--0-0	
1 No.	Woman	1-0-0 ,,	1--0-0	
	Sundries add for difficult nature of work		1--4-0	
			12--0-0	12 %

Quantity	Description of work	Rate	per	Amount			Total	
	(9) Country wood Kuol bogi wrought and put up. 1 cft.							
1 cft.	C.W. Saantlings. small S.I.No.47B	7-0-0	1cft.	7	0	0		
1 cft.	Lead 1 mile	5-10-0	100 cft.	0	0	11		
1/2No.	Carpenter 1st class	3--6-0	each	1	11	0		
1/4"No.	Man dazdoor	2--0-0	,,	0	8	0		
	Sundries for nails bolts 2"nuts			0	12	1		
				10	0	0	or	10 %
	(10) Providing country wood kuol bogi door of size 3'-0 x 6'-0 pannelled ~~asbest~~. cement asbestos plain sheets.							
with 163 cft.	Wood work	10-0-0	1 cft.	10	4	10		
5 sft.	Cost of cement asbestoes sheet plain.	0-8-0	sft.	2	8	0		
3 Nos.	But hinges brass	1-0-0	each	6	0	0		Local rate
3 Nos.	Brass T. Bolts 6"	3-0-0	,,	6	0	0		
1 No.	Brass pad bolt	5-0-0	,,	5	0	0		
6 Nos.	Hold fasts iron	1-0-0	,,	6	0	0		
18 sqft.	Labour charges	0-10-0	sft.	11	4	0		
	Sundries for screw nails etc.			1	15	2		
				49	0	0	or	49 0
	(11) Providing and fixing country wood (kuol boge) glazed windows of size 3'-6½" x 4'-1½" including all fittings.							
1.70	Wood work M.D.S.P.156	10-0-0	1cft.	17	0	0		
3 Nos.	Cost of glass pans	1-12-0	each	14	0	0		
4 Nos.	But hinges 3" sizebrass	0-12-0	,,	3	0	0		Local rates
4 No.	T.Bolts 5"	1--8-0	,,	6	0	0		
4 No.	Hold fasts	1--0-0	,,	4	0	0		
14.6 sft.	Labour charges	1--0-0	1sft.	14	8	7		
	Screens etc.			1	7	5		
				60	0	0		60%
	(12) Roofing with A.C. Trafford ~~asbe~~ corrugated sheets fixed ~~asbe~~. G.I. hook bolts with G.I. and between washers including ridge, boards etc. complete.			75	0	0		
100	Trafford sheet including ridges etc.	0-12-0	1sft.					
2 Nos.	Fitter 1st class	3--8-0	each	7	0	0		
1 No.	Men mazdoor ~~hook bolts washers etc.~~	2.0-0	"	2	0	0		
				3	0	0		
				87	0	0	or	87 %

Quantity	Description of work	Rate	per	Amount	Total
	(13) White washing 2 coats 100 sq.ft.		100		
2¼ cft	shell lime S.I.No.40	140 0 0	cft.	3 2 5	
	Lead 1 mile boat from Ullal.	3 12 0	"	0 1 4	
	Gum etc. L.S.			0 10 3	
1½ No.	Mason II Class	2 12 0	each	4 2 0	
				8 0 0	or 8 0
	(14) Painting two coats with chocolate paint new wood work 100 sq.ft.				
5½ lb.	Paint (best quality)	1 12 0	lb	10 1 0	
	Painter II cl.	2 12 0	each	3 1 6	
	Sundries			0 5 6	
				13 8 0	13 8
	(15) Tarring two coats with coal tar 100 sq.ft.				
8½ lb.	Coal tar	0 6 0	lb,	3 3 0	
1½ No.	Man mazdoor	2 0 0	each	3 0 0	
	Sundries			0 5 0	
				6 8 0	or 6 8
	(16) Rough stone dry packing revetment with old stone available at site. 100 cft. S.I.No.80)				
1 No.	Wooder]	3-0-0	each	3 0 0	
3 Nos.	Man Mazdoor	2-0-0	"	6 0 0	
2 No.	Women	1-0-0	"	2 0 0	
				11 0 0	11 0
	(17) Refilling with excavated earth other than sand.				
1000 cft.	S.I.No.26	10-0-0	1000 cft.	10 0 0	
"	Add for water ramming and consolidation.	3-8-0	"	3 8 0	
				13 8 0	13 8

Certified that the leads are correct.

Sd.
S.D.P. Port.

Sd. M. Venkatraman,
Executive Engineer,
South Kanara Dn.,
Mangalore.

P.D. V-15—Inner—23,448—16-10-41 (3)

ESTIMATE FORM—Abstract.

Item number. (1)	Quantity. (2)	Description of work. (3)	Rate. (4)	Per (5)	Amount. (6)
		Constructing a new Tide House at Mangalore Port			Rs.
1.	700 cft.	Dismantling granite stone revetment dry packing and stacking materials useful for reuse	2-10-0	100 cft.	18
2.	2500 cft.	Earthwork excavating in ordinary soil S.S.20.B.	21-12-0	1000 cft	54
3.	1000 cft.	Earthwork excavating in slushy soil under water S.S.20 B.	26-0-0	1000 cft.	26
4.	380 cft.	Concrete broken granite hard stone 1½" size in cement mortar 1:4:10	111-0-0	100 cft.	422
5.	380 cft.	Laterite masonry in cement mortar 1:4 for well work.	163-0-0	100 cft	619
6.	1100 cft.	Laterite masonry in cement mortar 1:4	150-8-0	100 cft.	1656
7.	25 cft.	~~Laterite masonry~~ Reinforced concrete in cement mortar 1:2:4	5-8-0	1 cft.	138
8.	1300 sft.	Plastering with cement mortar 1:4 ½" thick.	12-0-0	100 sft.	156
9.	21.00 cft.	Country wood (kinol bogi) wrought and put up	10-0-0	1cft.	210
10.	1 No.	Providing and fixing in position country wood (Kinol bogi) door of size 3'-0-x 6'-0 panelled with cement asbestos plain sheet including all fitting and furniture complete.	49-0-0	1 No.	49
11.	2 Nos.	Providing and fixing in position countrywood (kinol bogi) windows of size 3'-6½" x 4'-1½", glazed, including all fittings and furniture complete	60/-	1 No.	120
12.	240 sft.	Roofing with cement asbestos corrugated or Uralite sheets fixed with G.I. hook bolts, including all ridges fensals and end barge boards complete	87/-	100 sq.ft.	209
13.	600 sft.	White washing two coats	8/-	100 sft.	48
14.	300 s.ft.	Painting two coats with chocolate paint new wood work	13-8-0	100 sft.	41
15.	100 s.ft.	Tarring two coats with best hot coal tar.	6-8-0	100 s.ft.	7
16.	100 cft.	Rough stone dry packing for revetment using old stones available at site.	11/-	100 cft.	11
17.	L.S.	Fixing up of 1'-0" Dr. iron pipe inside the well in the correct position with iron clamps fixed to side wall, removing the table platform and automatic tide gauge from the old tide house and			

ESTIMATE FORM—Abstract.

Item number. (1)	Quantity. (2)	Description of work. (3)	Rate. (4)	Per (5)	Amount. (6)
			Rs.		Rs.
		fixing them in the new tide-house complete, including painting iron pipe and clamps two coats with redoxide paint	L.S.		114
18.	L.S.	Putting up ring bund pumping out water, scaffolding etc. complete.	L.S.	. .	2210-
19.	L.S.	Fixing up of a new reference gauge post in the river near the tide house.	L.S.		30-
20.	350 crt.	Refilling with excavated earth other than sand including watering ramming and consolidation.	15-8-0	1000 crt	5-
21.	L.S.	Contingencies and petty supervision.	L.S.		207-
					6550-
	L.S.	Deduct credit for old materials from old tide house.			550
					6000/-

Sd.
Signature & designati
the officer submittin
estimate.

n.

Countersigned.

State Port Officer.

P.W.D. (Ports)

Ports – Mangalore – Improvements – construction of new tide house – Estimate for Rs 6,000/- – Sanctioned

From the S.P.O. Letter No. 114-SD/54-1 dt. 1.4.54.

Order MS. No. 1346 P.W. dt. 15-4-54

The Govt. sanction the estimate for Rs. 6000/- (Rupees six thousand only) for the construction of a new permanent masonry tide house at the Port of Mangalore.

2. The expenditure is debitable to the Minor Ports Fund.

Dpl 12/4/54.

11.4.54

M 12.4.54